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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/928,276      | 08/10/2001  | Munir Simon          | 15693 US            | 6601             |

4859 7590 05/23/2003

MACMILLAN SOBANSKI & TODD, LLC  
ONE MARITIME PLAZA FOURTH FLOOR  
720 WATER STREET  
TOLEDO, OH 43604-1619

EXAMINER

THEISEN, DOUGLAS J

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1724

DATE MAILED: 05/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/928,276

Applicant(s)

SIMON, MUNIR

Examiner

Douglas J. Theisen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The inventor's signature is a photocopy, not an original, and the declaration is not dated.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 10 in Fig. 1. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claim 22 is objected to because of the following informalities: The phrase "A comprising" at the beginning of the claim is not needed. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by U. S. patent no. 5,024,766 to Mahmud. Mahmud describes a water purification apparatus comprising a first water purification means (activated carbon bed 23), a second water purification means (filter 24), and a third water purification means (ozone, UV, H<sub>2</sub>, O<sub>2</sub> reactor 25). Each of the water purification means has an inlet and an outlet, with the outlet of the first means connected to the inlet of the second means and the outlet of the second means connected to the inlet of the third. The inlet of the first means is connected to a supply of water (pump 22). The outlet of the third means is connected to a point of use (deozone unit 26). See Figure 1 and Column 2, lines 20-28.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. patent no. 3,276,458 to Iversen et al. in view of U. S. patent no. 4,808,287 to Hark.

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8. Iversen discloses a water purification apparatus comprising a first water purification means (activated carbon bed 76), a second water purification means (retaining plug 62 housing glass wool filter 69), and a third water purification means (sterilizer 18). The first water purification means has an inlet. The second water purification means has an outlet. The third water purification means has an inlet and an outlet, with the outlet of the second means connected to the inlet of the third. The inlet of the first means is connected to a supply of water (filter 14). The outlet of the third means is connected to a point of use (column 20). See Figures 1 and 3, column 6 lines 2-15, and column 7 lines 22-75.

9. Iversen does not disclose a structurally distinct outlet of the first water purification means (activated carbon bed 76) connected to a structurally distinct inlet of the second water purification means (retaining plug 62 housing glass wool filter 69).

10. Hark discloses a first water purification means (active carbon guard filter 3) having a structurally distinct outlet connected to a structurally distinct inlet of a second water purification means (guard filter 4). See the Figure and column 2 line 61 to column 3 line 9.

11. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to substitute the first and second water purification means of Hark for the first and second water purification means of Iversen.

12. The suggestion/motivation for doing so would have been so that the cartridges of the guard filter can be replaced as needed.

13. Therefore, it would have been obvious to combine Iversen with Hark to obtain the invention as specified in claim 22.

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14. Claims 1, 2, 4, 6, 11, 20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. patent no. 5,024,766 to Mahmud in view of U. S. patent no. 6,235,191 to Nakamura.

15. Mahmud describes a water purification apparatus comprising a first water purification means (activated carbon bed 23), a second water purification means (filter 24), and a third water purification means (ozone, UV, H<sub>2</sub>, O<sub>2</sub> reactor 25). Each of the water purification means has an inlet and an outlet, with the outlet of the first means connected to the inlet of the second means and the outlet of the second means connected to the inlet of the third. The inlet of the first means is connected to a supply of water (pump 22). The outlet of the third means is connected to a point of use (deoxygenation unit 26). See Figure 1 and Column 2, lines 20-28.

16. Mahmud does not disclose a bypass conduit having a valve. Mahmud also does not disclose a valve between the inlet end of the bypass conduit and the inlet of the first water purification means or a valve between the outlet of the third water purification means and the outlet of the bypass conduit.

17. Nakamura discloses a water purifying apparatus having an inlet pipe 12, an outlet pipe 22, and a bypass pipe 24 with a valve 24a. Valves 21a and 23a are provided so that the tap water flows through the bypass pipe 24 without passing through the purification unit 10 and the sterilization unit 20 and so that water is supplied through the outlet pipe 22. This arrangement is so that the raw water can be used while the purification unit 10 or the sterilization unit 20 is being repaired. See Figure 1 and column 2 lines 64-67 and column 5 lines 44-52.

18. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the bypass of Nakamura to the water purification apparatus of Mahmud. It would

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also have been obvious to select an arrangement of valves to isolate the three water purification means.

19. The suggestion/motivation for doing so would have been so that the purification means could be repaired or replaced and so that water could still be supplied to the outlet of the apparatus.

20. Therefore, it would have been obvious to combine Nakamura with Mahmud to obtain the invention as specified in claims 1, 2, 4, 6, 11, 20, and 23.

21. Claims 3, 7, 10, 12, 14, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahmud in view of Nakamura as applied to claims 1, 2, 4, 6, 11, 20, and 23 above, and further in view of U. S. patent no. 5, 585,003 to Van Newenhizen.

22. Mahmud and Nakamura do not disclose at least two carbon filters, at least two ultraviolet sources, or a pressure gage connected to a bypass conduit.

23. Van Newenhizen discloses a water treatment system with four activated carbon tanks in two parallel series which each include two tanks; ultraviolet lights 44, 98, and 100, with ultraviolet lights 98 and 100 arranged in series; and pressure indicator 112 in the return line and pressure indicator 94. See Figure 1, column 3 line 61 to column 4 line 3, and column 4 lines 48-56.

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24. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to ~~combine the carbon tanks, ultraviolet lights, and pressure gage of Van Newenhizen with Mahmud and Nakamura~~ *have provided at least two carbon filters, at least two UV lights, and a pressure gage to the Mahmud device as modified by Nakamura.*

25. The suggestion/motivation for doing so would have been to provide plural carbon filters to ensure adequate sorption of contaminants from the water and to provide a bypass for one set

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of carbon tanks; to provide plural ultraviolet lights to ensure adequate destruction or reduction of biological or other contamination; and to monitor the pressure of the water in the bypass pipe.

26. Therefore, it would have been obvious to combine Van Newenhizen with Mahmud and Nakamura to obtain the invention as specified in claims 3, 7, 10, 12, 14, and 19.

27. Claims 5, 9, 13, 17, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahmud in view of Nakamura as applied to claims 1, 2, 4, 6, 11, 20, and 23 above, and further in view of U. S. patent no. 5,972,211 to Jones.

28. Mahmud and Nakamura do not disclose at least two particle filters, pressure gages to measure a pressure differential, or control having inputs connected to the pressure gages and outputs connected to the valves.

29. Jones discloses the use of two U-shaped filtration units 10 in parallel, pressure gages at the inlet and outlet of the filtration units, and automatic control of valves because of a pressure differential across the filters in order to backwash the filters. See column 3 line 55 to column 4 line 67.

30. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the filtration units, pressure gages, and automatic control of valves of Jones with Mahmud and Nakamura.

31. The suggestion/motivation for doing so would have been to provide plural particle filters to ensure adequate removal of solids from the water, to provide pressure gages around the filters to monitor their condition, and to control the operation of the valves around the water purification apparatus to allow repair or replacement of individual units.



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32. Therefore, it would have been obvious to combine Jones with Mahmud and Nakamura to obtain the invention as specified in claims 5, 9, 13, 17, 18, and 21.

33. Claims 8, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahmud in view of Nakamura as applied to claims 1, 2, 4, 6, 11, 20, and 23 above, and further in view of U. S. patent no. 5,498,347 to Richard.

34. Mahmud and Nakamura do not disclose a water meter connected to the inlet or control of valves in response to a sensed water flow rate.

35. Richard discloses water treating apparatus having a counting system 5, which makes it possible to control water flow rate. See column 2 lines 61-67.

36. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the counting system 5 of Richard with Mahmud and Nakamura.

37. The suggestion/motivation for doing so would have been to monitor and control the flow rate of water through the water purification apparatus.

38. Therefore, it would have been obvious to combine Richard with Mahmud and Nakamura to obtain the invention as specified in claims 8, 15, and 16.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Theisen whose telephone number is 703-305-6499. The examiner can normally be reached on Monday, Tuesday, and Wednesday 6:30 until 4:00.

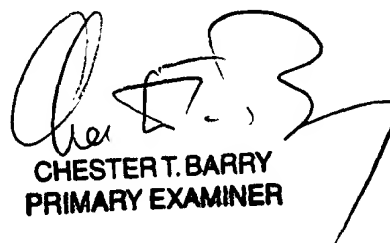
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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May 21, 2003



CHESTER T. BARRY  
PRIMARY EXAMINER